



Atty. Dkt. No. 074273-0242

JFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hirobumi FURIHATA et al.
Title: CONTROLLER DRIVER AND DISPLAY APPARATUS USING
THE SAME
Appl. No.: 10/561,270
International Filing Date: 06/28/2004
371(c) Date: 01/23/2006
Examiner: Unassigned
Art Unit: Unassigned
Confirmation Number: 5886

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith^{*} on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the mailing date of a foreign office communication and the foreign search report.

RELEVANCE OF EACH DOCUMENT

Document A17, listed on the attached PT0/SB/08 was cited as being relevant during the prosecution of the corresponding Korean application. A partial English translation of the Korean Office Action of August 13, 2007, follows:

(Concrete Reasons for Rejection)

1. It is deemed that the inventions related to Claims 1 through 4, 10, and 14 through 17 of the present application could have been easily invented by a person with ordinary knowledge of technology in the field to which the invention belongs prior to the filing of this application based on the inventions indicated below, and therefore cannot receive a patent according to the stipulations of Article 29, Paragraph 2 of the Japan Patent Law.

-- Note --

The present application relates to a memory control device for a flat-panel display to reduce power consumption, and relates to a data driver, Cited Invention 1 (US 2002/126108A1 (September 12, 2002)) relates to a semiconductor device for displaying a still image with reduced power consumption, and Cited Invention 2 (Unexamined Korean Patent Application Publication 2001-37956 (May 15, 2001)) relates to a display device for driving multiple panels simultaneously using a single driving device.

Comparison of the Invention as Set Forth in the Present Application to the Cited Inventions:

1) Claim 1 relates to a control device and driver, characterized in that it comprises a working memory, a graphics engine, a display memory, and a driver circuit.

The control device and driver comprising a working memory, a graphics engine, a display memory, and a driver circuit of Claim 1 corresponds to the display device of Cited Invention 1 comprising a first memory, a second control circuit, a memory portion, and a data line side driver circuit, and a person with ordinary knowledge of the technology in the field to which the invention belongs could have invented this invention easily based on Cited Invention 1.

Claim 2 and Claim 3 describe the type of image data of Claim 1, where this type of detailed structure is no more than a selection item that could be used selectively as needed, or which could be achieved easily by a simple design change, by a person with ordinary knowledge of the technology in this field, and thus no difficulty is seen in the structure pertaining thereto, and the effects thereof could also be anticipated.

Claim 4 limits the data transfer of the first bitmap data of Claim 1; however, this type of detailed structure is no more than a selection item that could be used selectively as needed, or which could be achieved easily by a simple design change, by a person with ordinary knowledge of the technology in this field, and thus no difficulty is seen in the structure pertaining thereto, and the effects thereof could also be anticipated.

Claim 10 limits the limits the memory cell within the working memory and display memory of Claim 1; however, this type of detailed structure is no more than a selection item that could be used selectively as needed, or which could be achieved easily by a simple design change, by a person with ordinary knowledge of the technology in this field, and thus no difficulty is seen in the structure pertaining thereto, and the effects thereof could also be anticipated.

Claim 14 and Claim 15 are characterized by the further inclusion of a processing circuit for processing bitmap data in Claim 1; however, the processing circuit corresponds to the second control circuit and data line side driver circuit, so a person with ordinary knowledge of the technology in the field to which the invention belongs could have invented this invention easily based on Cited Invention 1.

2) Claim 16 relates to a display device characterized in that it comprises a control device and driver and a first display panel and a second display panel, where the control device and driver comprises a working memory, a graphics engine, a display memory, and a driver circuit.

The invention as set forth in Claim 16 could have been invented easily by a person with ordinary knowledge of the technology in the field to which the invention belongs by combining the display device comprising the first memory, the second control circuit, the memory portion, and the data line side driver circuit of Cited Invention 1 with the display device that drives multiple panels simultaneously using a single driving device of Cited Invention 2.

Claim 17 is characterized by the display of identical images on the first display panel and the second display panel in Claim 16, where this type of detailed structure could have been invented easily by a person with ordinary knowledge of the technology in the field to which the invention belongs by combining the display device of Cited Invention 1 with the display device that drives multiple panels simultaneously using a single driving device in Cited Invention 2.

Consequently, the inventions related to Claims 1 through 4, 10, and 14 through 17 of the present application could have been easily invented by a person with ordinary knowledge of technology in the field to which the invention belongs by combining Cited Invention 1 and Cited Invention 2.

(Attachments)

Attachment 1: US 2002/126108A1 (September 12, 2002)

Attachment 2: Korean Unexamined Patent Application
Publication 2001-37956 (May 15, 2001).

Documents A1-16 and A18-A19, listed on the attached PTO/SB/08 were cited as being relevant during the prosecution of the corresponding European application. A copy of the European Search Report is attached setting forth the portion of each document considered relevant by the examiner. An English-language counterpart of the foreign-language documents has not been provided. The absence of a translation or an English-language counterpart document does not relieve the PTO from its duty to consider any submitted document (37 CFR §1.98 and MPEP§609).

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Applicant's statements regarding the Korean office action are based on a translation that applicant's representative obtained. These statements should in no way be considered as an agreement by applicants, with or an admission of, what is asserted in the Korean office action.

STATEMENT

The undersigned hereby states in accordance with 37 CFR §1.97(e)(1) that each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to filing of this Statement.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

Respectfully submitted,

Date: September 6, 2007

By  _____

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Substitute for form 1449/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Date Submitted: September 6, 2007

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number 10/561,270
 Filing Date 01/23/2006
 First Named Inventor Hirobumi FURUKAWA
 Art Unit 2629
 Examiner Name Unassigned
 Attorney Docket Number 074273-0242



U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|--------------------|-----------------------|--|--------------------------------|--|--|
| | | Number-Kind Code ² (if known) | | | |
| | A1 | 2004-056872A1 | 03-25-2004 | PAI et al. | |
| | A2 | 2002-126108A1 | 09-12-2002 | KATO et al. | |
| | A3 | 2002/075272A1 | 06-20-2002 | GORO et al. | |
| | A4 | 2001-015727A1 | 08-23-2001 | GUNJI et al. | |
| | A5 | 5,907,314A | 10-17-2001 | NEGISHI et al. | |
| | A6 | 5,170,157A | 12-08-1992 | ISHII | |
| | A7 | 5,034,733A | 07-23-1991 | OKAZAWA et al. | |

UNPUBLISHED U.S. PATENT APPLICATION DOCUMENTS

| Examiner Initials* | Cite No. ¹ | U.S. Patent Application Document | Filing Date of Cited Document MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
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| | | Serial Number-Kind Code ² (if known) | | | |

FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Documents | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁸ |
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| | | Country Code ³ Number ² Kind Code ⁵ (if known) | | | | |
| | A8 | EP 1 411 492 A1 | 04-21-2004 | NEC ELECTRONICS CORP. | | |
| | A9 | EP 1 182 639 A2 | 05-07-2001 | HITACHI KOKUSAI ELEC. | | |
| | A10 | EP 1 143 331 A2 | 10-10-2001 | SONY CORP. | | |
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| | A12 | EP 1 146 501 A1 | 10-17-2001 | SEIKO EPSON CORP. | | |
| | A13 | EP 0 881 598 A2 | 12-02-1998 | MITSUBISHI DENKI KABUSHIKI KAISHA | | |
| | A14 | EP 0 681 282 B1 | 11-08-1995 | SUN MICROSYSTEMS | | |
| | A15 | EP 0 681 280 B1 | 11-08-1995 | APPLE COMPUTER INC. | | |
| | A16 | EP 0 488 851 A1 | 11-19-1991 | THOMSON-LCD | | |
| | A17 | KR 10-2001-0037956 | 05-15-2001 | | | |
| | A18 | WO 95/12164 | 05-04-1995 | SUN MICROSYSTEMS INC. | | |
| | A19 | JP 7-028990 | 01-31-1995 | NEC SHIZUOKA LTD. | | A |

NON PATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁹ |
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| Examiner Signature | Date Considered |
|--------------------|-----------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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